Complete Summary

GUIDELINE TITLE

Abrasion and laceration wound care: pre-school through grade twelve.

BIBLIOGRAPHIC SOURCE(S)

Dawson JP, McIntosh HL. Abrasion and laceration wound care: pre-school through grade twelve. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core; 2006 Jul. 26 p. [29 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Abrasion and laceration wounds

GUIDELINE CATEGORY

Management
Treatment

CLINICAL SPECIALTY

Nursing
Pediatrics

INTENDED USERS

Advanced Practice Nurses
Nurses

GUIDELINE OBJECTIVE(S)

To provide school nurses and school personnel with the most current and effective tools and knowledge base in the treatment of abrasions and lacerations in children from pre-school to grade twelve

TARGET POPULATION

Children from pre-school through grade twelve with abrasions and lacerations

INTERVENTIONS AND PRACTICES CONSIDERED

1. Refer to doctor or emergency room for further evaluation of all students requiring treatment for full thickness injuries
2. Refer to Emergency Guidelines for Schools for care of students with bleeding injuries
3. Notify parents
4. Wound evaluation by school nurse or other trained office personnel
5. Apply pressure to partial thickness lacerations until bleeding stops and dress with band-aid or dry gauze
6. Asses using Bates-Jensen Wound Assessment Tool (BWAT)
7. Cleanse with liquid antibacterial soap and tap water only (not povidone-iodine, Dakin's, or hydrogen peroxide solutions)
8. Antibiotic creams and other topical medications only if standing orders are on file
9. Moist wound dressing containing hydrogel or hydrocolloids for partial thickness abrasions (Carrasyn, Lamin, IntraSite gel, Solosite, Comfeel, and RepliCare)
10. Instruct parents on proper dressing care
11. Daily evaluation of wound and dressing
12. Re-evaluate using Bates-Jensen Wound Assessment Tool after seven days and refer to doctor if wound is not healing

MAJOR OUTCOMES CONSIDERED

- Wound size
- Infection rates
- Wound-related pain
- Compliance with guideline

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Databases Searched

Databases used to search for articles included: OhioLINK Library Catalog and EBSCO Research Database. Specific search engines included: CINAHL, Alt Health Watch, Health Source: Consumer Edition, Health Source: Nursing/Academic Edition and MEDLINE. Also, Scholar Search under the Google search engine was used to locate some articles.

Inclusion and Exclusion Criteria

All articles found under the keywords mentioned below were considered for this research. Article topics were limited to moist wound dressings, wound outcomes using moist wound dressings and wound cleansing techniques.

Keywords

Keywords searched for this guideline include: wound, moist wound dressing, wound cleansing agents, school age injuries, dressings, wound cleansing agents, abrasions, lacerations, full-thickness wounds and partial-thickness wounds.

NUMBER OF SOURCE DOCUMENTS

The total number of documents identified for this research was thirty-one. Of this number, twenty-four were used.

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Grades of Evidence

A1 = Evidence from well-designed meta-analysis or well-done systematic review with results that consistently support a specific action (e.g. assessment, intervention, or treatment)

A2 = Evidence from one or more randomized controlled trials with consistent results

B1 = Evidence from high quality evidence-based practice guideline

B2 = Evidence from one or more quasi experimental studies with consistent results

C1 = Evidence from observational studies with consistent results (e.g. correlational, descriptive studies)

C2 = Inconsistent evidence from observational studies or controlled trials

D = Evidence from expert opinion, multiple case reports, or national consensus reports

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Experts in the subject of the proposed guideline are selected by the Research Translation and Dissemination Core to examine available research and write the guideline. Authors are given guidelines for performance of the systematic review of the evidence and in critiquing and weighing the strength of evidence.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This guideline underwent internal review at Research Translation and Dissemination Core (RTDC) and review by three external expert content reviewers (see Contact Resources page in the original guideline document). It was reviewed by experts knowledgeable of research on abrasion and laceration wound care, school nursing, and development of guidelines. The reviewers suggested additional evidence for selected actions, inclusion of some additional practice recommendations, and changes in the guideline presentation to enhance its clinical utility.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The grades of evidence (A1, A2, B1, B2, C1, C2, D) are defined at the end of the "Major Recommendations" field.

Assessment Tool

Bates-Jensen Wound Assessment Tool

The Bates-Jensen Wound Assessment Tool (BWAT) is designed to be used for initial wound assessment and for follow-up assessments. The BWAT is to be used ***by school nurses only*** for any students presenting to the office with an ***abrasion***. Each characteristic of the wound is measured and graded (See Appendix A in the original guideline document).

Description of the Practice

Wound Evaluation

School age children presenting to the office with wounds will be evaluated by the school nurse whenever possible. School nurses are a group of registered nurses specifically trained to meet the health needs of school age children (Adams & McCarthy, 2005. *Evidence Grade = D*).

When school nurses are unavailable, students may be evaluated and treated by trained office personnel. Persons other than the school nurse may use the excerpts taken from the **Emergency Guidelines for Schools** to assist with evaluation of injured students. These guidelines are located in Appendix B of the original guideline document.

Cleaning Solution

School age children presenting to the office for wound care will have wounds cleaned with liquid antibacterial soap and tap water only. Tap water is recommended as an effective solution for wound cleansing. It is cost effective, readily accessible and efficient. Tap water should never be used in cases where a full thickness injury has been sustained and tendons, blood vessels or bone have been exposed (Fernandez, Griffiths, & Ussia, 2004. *Evidence Grade = A1*). It is acceptable to use normal saline to irrigate wounds as mentioned earlier. However, it is understood that normal saline may not be as readily available as tap water.

Solutions that should ***not*** be used for the treatment of wounds include: povidone-iodine, Dakin's solution and hydrogen peroxide. These solutions are as likely to damage normal tissue as they are to destroy unwanted bacteria that may be present in or around the wound (Atiyeh, et al., 2002. *Evidence Grade = B1*). Antibiotic creams and other topical medications should only be used if standing orders are on file.

Dressings

School age children sustaining partial thickness abrasions in the school setting should receive a moist wound dressing immediately, or within two hours of injury. This dressing must stay in place no less than forty-eight hours and as long as seven days in order to enhance optimal wound healing and healing time. (Eaglstein, 2001. *Evidence Grade = B1*). Moist wound dressings, also referred to as moisture retentive dressings (MRDs) should contain hydrogel or hydrocolloids that enhance wound healing (Wiechula, 2003. *Evidence Grade = A1*). Moist wound dressings work by allowing rapid resurfacing or re-epithelialization of wound surfaces. Also, a moist wound surface allows for easier migration of proteins necessary for wound healing to take place (Eaglstein, 2001, *Evidence Grade = B1*). MRDs can be found in the *definition of key terms* section in the original guideline document.

A variety of dressings are commercially available that contain hydrocolloids and hydrogels. Some of these dressings include Carrasyn, Lamin, IntraSite gel, Solosite, Comfeel, and RepliCare (Eaglstein, 2001. *Evidence Grade = B1*). These dressings are readily available at pharmacies and in school health supply magazines.

Wound Care Procedure

Please refer to *Definition of Key Terms* section in the original guideline document to differentiate between lacerations, abrasions, partial thickness wounds and full thickness wounds.

- All students requiring treatment for ***full thickness injuries*** should be referred to the doctor or emergency room for further evaluation (Bren, 2002. *Evidence Grade = D*).
- Trained personnel and school nurses may refer to **Emergency Guidelines for Schools** in Appendix B in the original guideline document for care of students with ***bleeding injuries***.
- When appropriate, and according to school policy, parents are to be notified by telephone and informed regarding the type of wound that has been sustained.
- If the school nurse is unavailable, other trained personnel will care for the student's wound. If emergency care is not indicated according to the **Emergency Guidelines for Schools** (Appendix B in the original guideline document), use the following information to guide actions.
- Apply pressure to partial thickness ***lacerations*** until bleeding stops and dress with band-aid or dry gauze dressing. These injures should heal by first intention as described in *Definition of Key Terms* in the original guideline document (Eaglsein, 2001. *Evidence Grade = B1*).
- Students entering the clinic requiring partial thickness ***abrasion*** care will have their wound graded using the Bates-Jensen Wound Assessment Tool by the **school nurse** (Bates-Jensen, 2001).
- Wounds are to be washed with liquid antibacterial soap and water as described in the *Overview* section in the original guideline document under ***Cleansing***. The wound can be placed directly under running tap water and washed with gloved hands or by the student. Gauze can be used to wash the

wound if wound cannot be placed under tap (Fernandez, Griffiths, & Ussia, 2004. *Evidence Grade = A1*).

- After partial thickness abrasions have been cleaned, a moist wound dressing is to be applied. This dressing can be a hydrogel or hydrocolloid dressing and can be any of a variety of brand-name products as identified under the *Definition of Key Terms* section in the original guideline document (Eaglstein, 2001. *Evidence Grade = B1*).
- Both parents and student will be given verbal instructions that the dressing is to remain in place for seven days or until wound is healed. Dressing may be wrapped with plastic for bathing purposes. The student will be given an extra dressing to take home in the event that his/her dressing falls off, is lost or damaged and needs replaced. Parents are to be included in this instruction process.
- The student will report to the clinic each day to have wound and dressing evaluated or replaced as needed.
- After seven days, the partial thickness abrasion will be re-evaluated using the Bates-Jensen Wound Assessment Tool. If at the end of seven days re-epithelialization has occurred, no further dressing or clinic evaluations will be required.
- If after seven days the laceration or abrasion is not healing, the student is to be referred to his/her doctor.

Definitions:

Grades of Evidence

A1 = Evidence from well-designed meta-analysis or well-done systematic review with results that consistently support a specific action (e.g. assessment, intervention, or treatment)

A2 = Evidence from one or more randomized controlled trials with consistent results

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CLINICAL ALGORITHM(S)

A clinical algorithm is provided in the original guideline document titled, "Emergency Guidelines for Schools."

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for selected recommendations (see "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Decreased wound size
- Lower infection rates
- Decreased wound pain
- Increased student compliance with wound care

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The "Evaluation of Process and Outcomes" section and the appendices of the original guideline document contain a complete description of implementation strategies.

IMPLEMENTATION TOOLS

Audit Criteria/Indicators
Chart Documentation/Checklists/Forms
Clinical Algorithm
Resources
Staff Training/Competency Material

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Dawson JP, McIntosh HL. Abrasion and laceration wound care: pre-school through grade twelve. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core; 2006 Jul. 26 p. [29 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2006 Jul

GUIDELINE DEVELOPER(S)

University of Iowa Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core - Academic Institution

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GUIDELINE COMMITTEE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Not available at this time.

Print copies: Available from the University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core, 4118 Westlawn, Iowa City, IA 52242. For more information, please see the University of Iowa Gerontological Nursing Interventions Research Center Web site.

AVAILABILITY OF COMPANION DOCUMENTS

Appendices A - E of the original guideline document contain assessment tools (e.g., Bates-Jensen Wound Assessment, Abrasion and Laceration Wound Care in the Schools Knowledge Assessment Test), and a process evaluation monitor. Available from the University of Iowa Gerontological Nursing Interventions Research Center Web site.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on February 2, 2007. The information was verified by the guideline developer on February 21, 2007.

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